### Summary of Grant/Contract Awards – Fiscal Year 2015

**July 1, 2014 – September 30, 2014**

<table>
<thead>
<tr>
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<th>THIS REPORT</th>
<th>CUMULATIVE</th>
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<tbody>
<tr>
<td><strong>Dollars Awarded by Source</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Federal Government</td>
<td>7,469,137</td>
<td>7,469,137</td>
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<tr>
<td>State of Illinois</td>
<td>542,268</td>
<td>542,268</td>
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<tr>
<td>Corporate</td>
<td>316,379</td>
<td>316,379</td>
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<tr>
<td>Public/Not for Profit</td>
<td>571,859</td>
<td>571,859</td>
</tr>
<tr>
<td>Foreign</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8,899,643</td>
<td>8,899,643</td>
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| **Dollars Awarded by Purpose** |             |            |
| Instruction               | 1,222,876   | 1,222,876  |
| Research                  | 5,235,097   | 5,235,097  |
| Public Service            | 1,870,110   | 1,870,110  |
| Other Sponsored Activities* | 571,560     | 571,560    |
| **Total**                 | 8,899,643   | 8,899,643  |

| **Dollars Awarded by College** |             |            |
| College of Business        | 0           | 0          |
| College of Education        | 785,500     | 785,500    |
| College of Engineering and Engineering Technology | 1,890,927 | 1,890,927 |
| College of Health and Human Sciences | 121,728 | 121,728 |
| College of Law              | 0           | 0          |
| College of Liberal Arts and Sciences | 2,801,976 | 2,801,976 |
| College of Visual and Performing Arts | 2,500 | 2,500 |
| Outreach, Engagement, and Information Technologies | 1,162,175 | 1,162,175 |
| Other Academic Units        | 2,134,837   | 2,134,837  |
| Other University Units      | 0           | 0          |
| **Total**                   | 8,899,643   | 8,899,643  |

ALLIED HEALTH AND COMMUNICATIVE DISORDERS

Department of Education for "Rehabilitation of Individuals who are Deaf or Hard of Hearing." Daniel L. Boutin.
Award: $96,762.00. (Cumulative $482,642.00).
October 1, 2014 - September 30, 2015. (Instructional Programs) Instructional Programs.

This project supports students in a pre-service professional preparation program, training them to be counselors for persons who are deaf or hard of hearing.

ANTHROPOLOGY

Institute of Museum & Library Services for "Anthropology Museum Rehousing Project." Jennifer Kirker-Priest/Laura McDowell Hopper.
Award: $150,000.00.
November 1, 2014 - October 31, 2016. (Other Sponsored Activities) Other.

The goal of this project is to rehouse the cultural collections of the Anthropology Museum into new compact shelving.

Rutgers, the State University of New Jersey for "Direct and Indirect Fitness Benefits of Cooperative Behavior in Wild Saddleback Tamarins." Leila M. Porter.
Award: $7,464.00.

The purpose of this project is to examine factors influencing cooperative behavior in wild saddleback tamarins in northern Bolivia.

Department of State for "Philippine Youth Leader Program 2013: Environmental Leadership in the Philippines: Developing Youth as Agents of Change and Ecological Activism." Susan D. Russell/Lina D. Susan.
Award: $249,475.00. (Cumulative $753,435.00).
September 1, 2012 - August 31, 2016. (Other Sponsored Activities) Public Service.

The purpose of this project is to conduct a U.S.-based four week exchange program to bring teenagers and adult educator volunteers from the Philippines to the U.S. for exposure to/training in civic education, leadership, diversity, and community engagement, and preparation to conduct projects at home that serve a community need.

Award: $1,500.00.

The goal of the proposed project is to better understand the role of soil consumption in primates by studying three primate species in Madagascar.

BIOLOGICAL SCIENCES

The purpose of this project is to further the understanding of the signaling pathways involved in the production of mycotoxins, and fungal development and the role of VeA in fungal virulence.


This project is an integrative approach to merging genetics, gene expression, broad-scale taxonomic comparisons, plant-level function and global-scale ecosystem function focusing on the evolutionary and geographic distribution of drought tolerance.


The purpose of this project is to study the impacts bison and prairie restoration have on grassland bird density, survivorship, and habitat quality through monitoring and experimental analysis of plots restored 1-26 years ago as well as before and after bison reintroduction.

CAMPUS CHILD CARE


This project requests funds for the installation and fall zone material for a climbing structure to complete the Infant/Toddler outdoor environment.

CENTER FOR NON-GOVERNMENTAL LEADERSHIP AND DEVELOPMENT


The purpose of this project is to provide valuable administrative training to an NIU graduate student who will work with staff at the DeKalb County Community Foundation.
CHEMISTRY AND BIOCHEMISTRY


To evaluate the Inhibitory Activity of Small Molecule Compounds Against Rickettsia prowazekii Methionine Aminopeptidase (MetAp) using in vitro & in vivo Assays.


The purpose of this project is to produce one to three new zinc crystals and new aluminum crystals.

COLLEGE OF ENGINEERING & ENGINEERING TECH, DEAN'S OFFICE


Funds are used for NIU to organize, participate and report on the results of sheet metal forming research and development roadmap meetings.

COLLEGE OF VISUAL AND PERFORMING ARTS, DEAN'S OFFICE


The NIU School of Music proposes to bring four music groups, from four countries around the world, to DeKalb County, for one week each over a period from fall 2013 through spring 2015. Each group will provide numerous workshops to DeKalb County school children as well as a community concert.

COMPUTER SCIENCE


This project supports Field Programmable Gate Array (FPGA) hardware, software and coursework in high performance computing, financial risk management, and financial engineering.
COUNSELING, ADULT AND HIGHER EDUCATION

Illinois Department of Human Services for "Project Educare." Debra Pender.
Award: $38,000.00.

The major goal of the project is to develop and maintain a child and adolescent-specific evidence-based practice e-Learning Collaborative for continuing education for providers working within the Illinois Department of Mental Health, Child and Adolescent Division, and its supported agencies.

DIVISION OF RESEARCH AND INNOVATION PARTNERSHIPS, VP'S

Illinois Board of Higher Education for "FY 2014 Illinois Minority Graduate Fellowships (DFI)." Bradley G. Bond.
Award: $5,982.00. (Cumulative $86,982.00).
August 1, 2013 - August 31, 2014. (Instructional Programs) Instructional Programs.

The purpose of this project is to support diversification of faculty at NIU.

ELECTRICAL ENGINEERING

Tezzaron Semiconductor, Corp. for "Design and Testing a Microchip for Testing Liquid Cooling of 3D ICs." Ibrahim M. Abdel-Motaleb.
Award: $10,000.00. (Cumulative $40,000.00).

The purpose of the project is to design a microchip that includes arrays of heaters and temperature sensors to measure the chip temperature.

ENGINEERING TECHNOLOGY

Argonne National Laboratory for "Study of Ceramic Ion Conductors in Tandem with Metal Anodes and/or Various Concentrated Electrolytes." David Schroeder.
Award: $180,511.00.

The purpose of the project is to support Prof. Schroeder in the Non-aqueous Flow Battery and MV Interface program within the Joint Center for Electrochemical Research, using his background in thin film engineering, microscopy, ceramics, and surface characterization to study the various interfacial regions involved with electrochemical cells based on ceramics.

EXECUTIVE VICE PRESIDENT AND PROVOST

Award: $408,007.00. (Cumulative $2,000,000.00).  
September 1, 2011 - August 31, 2016. (Instructional Programs) Instructional Programs.

Fund will be used to promote a campus-wide effort to encourage new freshmen and sophomore students who are undecided about their major or enrolled in a STEM major to select STEM as a career choice.

Award: $1,700,529.00.  

The purpose of this project is to perform research services directed toward increasing the productivity and global competitive advantage of regionally-based manufacturing and technology-related firms.

GEOGRAPHY

DeKalb County Economic Development Corporation for "DCEDC Internship." Andrew J. Krmenec.  
Award: $10,164.00.  

The purpose of this project is to support a Geography graduate student's valuable training experience at the DeKalb County Economic Development Corporation.

GEOLOGY AND ENVIRONMENTAL GEOSCIENCES

Award: $90,000.00.  

The funds will be used to collect data on the magnitude of water-gun induced ground vibrations in various wall and bank materials and measure extent and shape of the pressure field within the water column. These data will be integrated into a computer model or series of models that could be used to predict the physical forces involved in firing the water gun. The output from the model(s) may be used help evaluate future water gun testing sites.

Award: $433,497.00.  

The goal of this project is to provide an assessment of hydraulic fracture and shear failure during industrial-scale carbon capture and sequestration at the Wallula Basalt Sequestration Pilot Project.
National Science Foundation for "Collaborative Research: The Geo-CC&CP Foundry - Building Institutional Capacity for Broadening Participation in the Geoscience Workforce."
Sheldon Turner/Nicole LaDue.
Award: $192,060.00.

The major goal of the project is to increase participation of underrepresented groups in STEM fields through building institutional and individual faculty capacity for designing teaching curriculum to support students and to generate best practices for engaging students and supporting faculty in this endeavor.

ILLINOIS INTERACTIVE REPORT CARD

Award: $338,854.00.

The purpose of this project is to provide multiple Illinois audiences with data through the Illinois Report Card that they can use to improve schools.

Award: $468,086.00. (Cumulative $3,128,904.00).

Funds will be used to maintain the Interactive Illinois Report Card modules MYIIRC, Rising Star, 21st Century and knowledge transfer/consultation services.

INDUSTRIAL ENGINEERING

CGH Medical Center for "'Lean' Process Improvement at CGH Medical Center." Shi-Jie (Gary) Chen.
Award: $4,600.00.

This project will provide a valuable experiential learning opportunity to a graduate student from NIU's Industrial and Systems Engineering Program. The student will gain hands-on experience through working with staff at CGH Medical Center to study and improve that organization's method of lean healthcare.

Mi-Jack Products, Inc. for "Optimizing the Paint Shop Flow." Shi-Jie (Gary) Chen.
Award: $11,012.00.

The purpose of this project is to analyze Mi-Jack's paint shop flow area and make
recommendations for improvements that will help the company increase throughput while lowering cost.

Award: $21,299.00. (Cumulative $50,752.00).

Funds are requested to implement a Pull System for post paint operations at Justrite Manufacturing Company.

Award: $86,426.00. (Cumulative $121,227.00).

The overall objective of this project initiative is to conduct time studies, balance the line, and reduce process inefficiencies for K-series wheel loader assembly lines.

Tek Pak, Inc. for "Quality Management System for Tek Pak." Purushothaman Damodaran.
Award: $30,000.00.

The purpose of this project is to establish a quality management system structured around ISO 13485, which represents the requirements for quality management systems relating to the design and manufacture of medical devices.

Dunlee, a Division of Philips Healthcare for "Lean Out Insert Assembly." Purushothaman Damodaran.
Award: $33,000.00.

The purpose of the project is to improve process efficiency at the insert assembly process at Dunlee for replacement products that go into various scanners used in the healthcare industry.

Award: $19,742.00. (Cumulative $153,616.00).

The purpose of this project is to assess the current cellular layout for, and to analyze the current state of the activities such as material flow, storage, etc. associated with, SPX's Power Team product line.

INTERNATIONAL PROGRAMS OFFICE

ELS Educational Services, Inc. for "Impact of ELS Education on Success in Undergraduate and Graduate School Development of the Design for a Long Term Validation Study." Dan House.
Award: $10,000.00. (Cumulative $20,000.00).

The purpose of the project is to assemble data from NIU as an ELS host institution, which will then be analyzed across academic disciplines and student demographics by ELS.

KINESIOLOGY AND PHYSICAL EDUCATION


The purpose of this project is to provide a valuable hands-on professional experience to a Northern Illinois University graduate student.

LITERACY AND ELEMENTARY EDUCATION


The purpose of the project is to provide research assistance to ISBE related to the education of English learners in the state of Illinois.


The purpose of this project is to train teachers who will earn the Illinois ESL and/or bilingual endorsement with an emphasis on STEM subjects.

MECHANICAL ENGINEERING


Over the past few years we have built a videogame learning environment in which we have measured higher levels of student learning and student engagement. Now we shall test whether other engineering educators can produce similar results with the game, and to test whether the game is a viable and attractive tool that educators will want to use.

The purpose of this project is to develop and evaluate improved thermal interface materials, with emphasis on high flux heat acquisition and transport devices.

Award: $12,000.00.

The purpose of this project is to process and characterize NIU developed Graphene and High K BNNTs, for use in a related SBIR subcontract award from AMSENG.

Award: $1,181,467.00. (Cumulative $2,389,758.00).

The major goal of this project is to provide a complete experimental and numerical solution to meet the challenges as described in NIST's "Roadmap Workshop on Measurement Science for Metal-Based Additive Manufacturing" which when successful will ensure the widespread adoption of AM to industries that will benefit from the technology.

University of Illinois at Chicago for "UIC - Intraocular Ophthalmic Cutting Device." Federico Sciammarella.
Award: $4,999.00.

The purpose of the project is to design and create a collapsible, intraocular instrument that can cut the lens capsule and corneal endothelium (back surface of the cornea) in a controlled and reproducible manner.

NORTHERN PUBLIC RADIO

Award: $12,575.00.

Funds are being used to support high quality public radio programming.

Award: $13,550.00.
June 1, 2014 - August 31, 2014. (Other Sponsored Activities) Public Service.

Funds are being used to support high quality public radio programming.

Award: $30,000.00.
Funds are being used to support high quality public radio programming.

Award: $12,575.00.
Funds are being used to support high quality public radio programming.

Corporation for Public Broadcasting for "FY14 Community Service Grant." Staci Hoste.
Award: $230,985.00.
Funds are being used to support high quality public radio programming.

Award: $13,550.00.
June 1, 2014 - August 31, 2014. (Other Sponsored Activities) Public Service.
Funds are being used to support high quality public radio programming.

NURSING AND HEALTH STUDIES

Award: $10,333.00.
Professor Bilaver will perform statistical analyses with the data from two large datasets to examine the prevalence and severity of food allergies.

Kane County Health Department for "Designing a System to Build the Collective Impact of Community Organizations for Fit for Kids Kane County: Establishment of a Fit for kids Organizations Toolkit." Lynn Herrmann/Beverly W. Henry/James R. Ciesla.
Award: $14,633.00.
This project will define benchmarks for Kane County organizations to be designated as Fit for Kids community sites and then will design an implementation process for those organizations to become actively engaged in support of the Fit for Kids initiative.

PHYSICS

Award: $60,000.00.
The immediate goal of the fellowship is to foster collaboration with physicists at ANL and improve on searches for new physics via pair production of Higgs boson in the diphoton+bb channel.

Department of Energy for "Department of Energy-Office of Science and Technology Policy 2 year Appointment." Gerald C. Blazey.
Award: $55,277.00. (Cumulative $630,490.00).
June 1, 2011 - September 30, 2014. (Other Sponsored Activities) Other.

Dr. Blazey's duties will include coordination with the White House Office of Science and Technology Policy, as the Senior Policy Advisor for Physical Sciences. The OSTP plays an important role in coordinating interagency relationships between NSF, NASA, and DOE, in particular, and for interfacing with the Office of Management and Budget.

Award: $33,907.00. (Cumulative $318,528.00).

Funds will be used for NIU's participation in the ATLAS Project through the simulation of a particle detector response.

University of Notre Dame for "The Quarknet Project." Dhiman Chakraborty.
Award: $12,440.00. (Cumulative $26,180.00).

The purpose of this project is to involve high school teachers and their students in state-of-the-art research that seeks to resolve some of the mysteries about the structure of matter and the fundamental forces of nature.

Argonne National Laboratory for "Upgrade of the Thomas Jefferson National Accelerator Facility." Bela Erdelyi.
Award: $25,000.00. (Cumulative $96,000.00).

The purpose of the project is to provide design assistance for the upgrade of the Thomas Jefferson National Accelerator Facility.

University of Illinois at Chicago for "Measurement of Thermoelectric Properties of Substituted SrTi03 Perovskites at Room Temperature." Bogdan M. Dabrowski.
Award: $2,582.00.

The purpose of this project is to measure the thermoelectric power, electrical conductivity, and heat conductivity of substituted SrTiO3 perovskites at room temperature.

Department of Energy for "Studies of Conventional and ERL-Based Recirculator Electron
Cooling for an Electron Ion Collider." Bela Erdelyi.
Award: $50,000.00. (Cumulative $157,000.00).

The purpose of this project is to develop novel tools necessary for accurate and efficient modeling, simulation and design optimization of electron cooling options for a future Electron Ion Collider, or any other nuclear physics facility where high luminosity, low transverse and longitudinal emittance are required.

Argonne National Laboratory for "Joint Appointment: Andreas Glatz." Andreas Glatz.
Award: $127,266.00. (Cumulative $331,850.00).
August 15, 2014 - August 14, 2015. (Other Sponsored Activities) IPA or Joint Appointment.

Funds are being used for a joint appointment between NIU and Argonne in support of Dr. Andreas Glatz.

Fermi National Accelerator Laboratory for "Joint Appointment NIU/FNAL." Philippe P. Piot.
Award: $78,176.00. (Cumulative $353,321.00).
August 16, 2014 - August 15, 2015. (Other Sponsored Activities) IPA or Joint Appointment.

Funds are being used, per the NIU-Fermilab Memorandum of Understanding executed in December 2005, to support one-half of the PI's 9-month academic salary as a joint faculty appointee of the Department of Physics and Fermi National Accelerator Laboratory.

Fermi National Accelerator Laboratory for "Investigation of field-emission electron source at Fermilab." Philippe R. Piot.
Award: $53,141.00.

The purpose of this project is to test a radio-frequency gun powered by a 1.3- and 3.9-GHz klystrons simultaneously to demonstrate picosecond level gating of field emission from a carbon-nanotube cathode.

Department of Energy for "Searching for Physics Beyond the Standard Model at the Intensity Frontier." Michael Eads/Nicholas Pohlman.
Award: $118,000.00.

The goal of this proposal is to discover physics beyond the standard model through the precision measurement of the properties of standard model particles.

Fermi National Accelerator Laboratory for "Joint Appointment NIU/FNAL." Young-Min Shin.
Award: $8,069.00. (Cumulative $178,155.00).
August 16, 2014 - September 30, 2014. (Other Sponsored Activities) IPA or Joint Appointment.

Funds are being used, per the Memorandum of Understanding between NIU and FNAL, to support one-half of the PI's 9-month academic salary as a joint faculty appointee of the Department of Physics and the Fermi National Accelerator Laboratory.
National Science Foundation for "Creation and Crystallite Control of Artificial Ices Using Superconducting Vortices." Zhili Xiao.
Award: $327,757.00.

This proposed work will open a new front in artificial ice research by pursuing the experimental realization and novel properties of square and kagome vortex ices in nanostructured superconductors.

Argonne National Laboratory for "Joint Appointment for Zhili Xiao." Zhili Xiao.
Award: $114,290.00. (Cumulative $555,154.00).
August 16, 2014 - August 15, 2015. (Other Sponsored Activities) IPA or Joint Appointment.

Funds will be used to support the appointment of an NIU faculty member to conduct research and development activities under the direction and guidance of Argonne National Laboratory.

PSYCHOLOGY

Kreider Services, Inc. for "Graduate Psychology Externship at Kreider Services." Greg Waas/Karen J. White.
Award: $45,800.00. (Cumulative $93,280.00).

Funds will be used to support a psychology department graduate extern and faculty supervisor at Kreider Services.

Learning Partnership for "An Examination of the Qualities of Interactive Science Learning Environments that Promote Optimal Motivation." Amanda M. Durik.
Award: $57,315.00. (Cumulative $205,699.00).

Funds will be used to (1) conduct pilot studies to evaluate optimal measurement of motivational variables and help collect data off-site, (2) manage datasets and conduct data analyses, and (3) develop research reports.

School District # 303, St. Charles for "Psychology Externship at St. Charles School District."
Greg Waas/Michelle Demaray/Christine E. Malecki.
Award: $27,796.00. (Cumulative $77,123.00).

The goal of the project is to support a psychology graduate student externship placement with St. Charles schools.

Award: $17,031.00. (Cumulative $34,062.00).
This project is a psychology graduate student externship at Palatine School District.

Exceptional Children Have Opportunities (ECHO) for "Psychology Externship at ECHO." Greg Waas/Michelle Demaray/Christine E. Malecki.
Award: $10,378.00.

This project supports a graduate psychology student externship at Exceptional Children Have Opportunities (ECHO)

Illinois Department of Children and Family Services for "Integrated Assessment Program FY2014." Greg Waas
Award: $61,901.00. (Cumulative $2,870,719.00).

Funds will be used to provide clinical screening and assessment services to children and adults served by Illinois DCFS in Fiscal Year 2014.

Award: $15,008.00. (Cumulative $199,037.00).

Funds will be used to carry out experiments on the comprehension of multiple documents among college freshmen, and possibly at primary and secondary schools in the northern Illinois region.

Award: $17,031.00. (Cumulative $51,093.00).

Funds will be used to support a graduate psychology externship at Genoa-Kingston School District.

School District # 425, Indian Creek for "Psychology Externship at Indian Creek School District."
Greg Waas/Michelle Demaray/Christine E. Malecki.
Award: $17,031.00.

Funds will be used to support a graduate externship in school psychology with Indian Creek School District.

PUBLIC ADMINISTRATION

City of Montgomery for "Administrative Internship." Denise Burchard.
Award: $21,840.00.
The purpose of this project is to provide valuable internship training to an NIU graduate student who will work with staff in the City of Montgomery.

City of DeKalb for "Management Intern." Denise Burchard.  
Award: $12,086.00. (Cumulative $24,172.00).  

The purpose of this project is to provide valuable internship training to an NIU graduate student who will work with staff in the City of DeKalb's Planning and Economic Development Department, City Manager's Office, and on the DeKalb-Sycamore Area Transportation Study.

Award: $33,600.00.  

The purpose of this project is to provide valuable administrative training to an NIU graduate student who will work with staff in the Village of Glenview.

Award: $15,400.00.  

The purpose of this project is to provide a valuable experiential learning opportunity to an NIU graduate student, who will work with TDS staff on administrative projects.

Village of Elk Grove for "Administrative Internship." Denise Burchard.  
Award: $16,170.00.  

The purpose of this project is to provide a valuable experiential learning opportunity to an NIU graduate student who will work with staff in the Village of Elk Grove on administrative projects.

City of Highland Park for "Administrative Intern." Denise Burchard.  
Award: $18,118.00.  

The purpose of this project is to provide a valuable experiential learning opportunity to a Northern Illinois University graduate student who assist City of Highland Park staff with the general administration of local government.

SPECIAL AND EARLY EDUCATION

Department of Education for "Low Incidence Personnel Program for Training of Teachers and Orientation and Mobility Instructors of Students with Visual Impairments with Additional Training in Assistive Technology and English Language Learners." Gaylen G. Kapperman/Jodi Sticken/Stacy Kelly.
Award: $250,000.00. (Cumulative $500,000.00).

The major goal of the program is to train graduate students as teachers and orientation and mobility specialists to serve the needs of blind and visually impaired children in grades P-12.

Department of Education for "Preparing the USA for the UEB: A Massively Open Online Course for Personnel Providing Vocational Rehabilitation Services or Educational Services to Youth and Adults who are Blind." Stacy Kelly.
Award: $110,000.00.
October 1, 2014 - September 30, 2015. (Instructional Programs) Instructional Programs.

The major goal of the project is the development and implementation of a Massively Open Online Course (MOOC) for retraining service providers in the field of visual impairments in schools and rehabilitation settings on the new Unified English Braille program.

STATISTICS

AbbVie Inc. for "Abbott Laboratories Externship." Rama T. Lingham.
Award: $72,900.00. (Cumulative $194,900.00).
June 1, 2014 – May 31, 2015. (Instructional Programs) Instructional Programs.

The purpose of this project is to support a graduate student from NIU's Statistics Division in receiving real-world experience in the practice of statistics by working in the division of Data and Statistical Sciences of Abbott Labs.

SURVEY RESEARCH TEAM

Quality Quest for Health of Illinois, Inc. for "Partnership for a Healthy Community." Mindy Schneiderman.
Award: $42,000.00.

The purpose of this project is to complete 1,600 telephone interviews with residents of households in Peoria and Tazewell Counties to gather data for Quality Quest's Community Transformation Grant award.